

the author regard all these as unworthy of specific rank? If so, to what species does he reduce them? The users of this book are certainly entitled to know.

The geographic ranges given are not always too accurate. For instance, *Castalia elegans* is recorded by Muenscher as occurring only in southern Texas. Actually, it is found also in the Big Cypress country of Florida, as Dr. Small has recorded in his Manual (p. 543) and elsewhere. Also, the reviewer wonders why the genera *Lachnocaulon* (with 8 species in the United States) and *Syngonanthus* (1 species) were omitted. They seem to be as worthy of inclusion as some of the species of *Eriocaulon* which are not truly aquatic. Natives of those states will be surprised that *Eriocaulon septangulare* is not recorded from Maine (where it occurs in at least six counties), Delaware, or Maryland (where it occurs in at least three counties). *E. compressum*, also, is known from Maryland and Louisiana and *E. parkeri* from eastern Pennsylvania.

Short bibliographies of the most pertinent literature are given at the close of most of the family treatments, but a general bibliography at the end of the book would have been helpful. Curiously, there seems to be no mention anywhere in the book of the very similar handbook published by Dr. Fassett in 1940.¹

Readers will be fascinated by the figures which Dr. Muenscher gives concerning seed weights. For instance, the "seeds" of *Trapa natans* are about one million times as heavy as those of *Stomoisia cornuta*, of which it requires 175 million to make a pound! Aquatic grass seeds vary from 15,000 to 2,000,000 per pound; sedges from 80,000 to one million; *Xyris* from 35 to 50 million! The widespread occurrence of vegetative reproduction among aquatics and the various means of effecting this, are also admirably presented.

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THE NEW YORK BOTANICAL GARDEN
NEW YORK

¹ Fassett, Norman C. A manual of aquatic plants. 382 pp. McGraw Hill Book Co. 1940

Flora of Illinois

Flora of Illinois. By George Neville Jones. The American Midland Naturalist Monograph No. 2, edited by Theodor Just. vii + 318 pp. 2 maps. Notre Dame, Indiana: University of Notre Dame. 1945. \$4.00.

Up to the time of the publication of this work, no comprehensive treatment of the flora of Illinois had ever been published. As Dr. Blake has recently pointed out,¹ there are only 14 of our states that have a published flora "considered to represent in a fairly adequate and detailed way the present state of

our knowledge of plant distribution" in that state. Of these, only two are really comprehensive, with maps showing the known distribution of each species by counties within the state. Some of our states, like Florida and Idaho, have never had even an attempt at a state flora published; others have state floras which are so hopelessly out-of-date as to be practically worthless (*e.g.* Kentucky, published in 1853; Louisiana, 1852; Massachusetts, 1835; South Carolina, 1816-1824). The only work on Illinois previous to this which might have any claim to the title of a state flora was Patterson's "Catalogue," published in 1876,² and consisting of a mere annotated list of 54 pages.

While Dr. Jones' book is based merely on field studies of the past five years and on herbarium specimens deposited mainly in the herbarium of the University of Illinois, it is an excellent piece of work and fills a gap in botanical literature. As the author himself states "it is hoped that the present study may serve to stimulate further interest in the local flora." The book will surely serve as a solid foundation on which Dr. Jones and others can later build a more comprehensive flora, in the fashion of Deam's work on Indiana,³ based on much more field work and the examination of the material in many more of the world's important herbaria, with the distribution of each species indicated by counties on outline maps. In this connection one paragraph from Jones' introduction is well worth repeating here and deserves to be pondered by American taxonomists: "Although it is now almost a century and a half since the first botanical explorers visited Illinois, our knowledge of the botany of this region is far from complete. In a few areas fairly adequate botanical collections have been made, but more than half of the 102 counties of Illinois, according to the records at present, are almost wholly unexplored botanically. The distribution of the 'lower plants' of Illinois is comparatively unknown, and we lack even a check-list of the algae, fungi, and bryophytes. Obviously, much work remains to be done on the botany of Illinois."

Jones' book gives no detailed descriptions of the families, genera, or species treated, as most standard floras do, nor are there any illustrations of the plants, nor any specific distributional maps. Instead, the book is arranged in the form of a gigantic key, through which the student may carry his plant specimen and eventually arrive at the correct name. This key divides the vascular plants into two groups: (1) Seed Plants and (2) Ferns and Fern-allies. The Seed Plants are divided into: (a) herbaceous plants and (b) woody plants. These, in turn, are divided into 18 sections with easily-observed characters like "herbs with compound leaves," "grass-like plants," etc. Each of these sections contains one or more families. There follow keys to the genera

¹ BLAKE, S. F. State floras of the United States. *Chron. Bot.* 7: 258-261. 1942.

² PATTERSON, H. N. Catalogue of the phaenogamous and vascular cryptogamous plants of Illinois, native and introduced. 1-54. 1876.

³ DEAM, C. C. Flora of Indiana. 1-1236, 2250 maps. 1940.

in each family and keys to the species in each genus (when more than one). Recommended common names are given for most (but, unfortunately, not all) of the genera and species. Authorities are given for scientific names, and all specific epithets are in lower-case. The keys to species include the most important diagnostic characters of the plant, a statement of its habitat, time of flowering, and the most important synonymy. Sometimes the frequency of occurrence of a species is indicated by the use of terms like "common," "local," "infrequent," etc., and actual herbarium specimens of rare or questionable plants are often cited to substantiate the record. A glossary, bibliography, list of taxonomic monographs and revisions consulted, author index, index to common and scientific plant names (lamentably not so complete as it should be), and an outline map of the state are included. The introduction gives a geographic, geologic, and topographic description of the state and goes into detail regarding its 8 vegetational divisions.

Of the 2124 species of vascular plants recorded by Jones (unfortunately he ignores entities beneath specific rank, as well as hybrids), 1786 are indigenous and 338 are either adventive or introduced. There are 302 species of trees and shrubs in 111 genera and 49 families—*Quercus*, *Salix*, and *Crataegus* being the three largest in number of species. Of herbaceous plants he records 1822 species in 713 genera and 113 families, with *Carex* the largest genus (114 species). There are 70 genera and 215 species of grasses in the state, *Panicum* being the largest genus.

Jones' nomenclature is, on the whole, very conservative as to family, generic, and specific limits, but in the choice of accepted names for the species treated he is up-to-date.

Let us have more such state floras!

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THE NEW YORK BOTANICAL GARDEN
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The following publications have recently come to the editor:

"The Cornell Plantations" is a new quarterly illustrated magazine published in the interests of a new project at Cornell University. This project originated as an idea for an arboretum at the University, but now it has been enlarged to include a unified development of the 3,000 acres of the University domain. As described by Liberty Hyde Bailey, emeritus dean of the College of Agriculture, the grass, and crops, and trees, the live-stock and wild animals, "are invaluable treasures and stimulators. All of them should be accessible and available in a single, comprehensive organized plan, whereby utility, personal interest, fertile suggestion, and beauty of localities and landscape may be brought to bear in a noble concept of education." The magazine is said to have a dual purpose: "First to be of interest and value to persons who are en-

thusiastic about the objects which the Plantations seek to foster; and, second, to help translate that enthusiasm into support for the enterprise of making an outdoor laboratory where Cornell students and professors can learn about things that grow, and where visitors, even from far countries, can study from living specimens." Among the articles published in the first three numbers are the following: Ten early flowering shrubs; A history of the Plantations development; Opportunities for cooperative research; Birds on the Plantations; Sheep for food, clothing, and pleasure; As an artist sees the beauties of landscape; and When to cut roses. The editor is Professor Emeritus Bristow Adams, and the address is: "The Cornell Plantations" Roberts Hall, Cornell University, Ithaca, N. Y.

The latest numbers of two series of publications of The Black Rock Forest, Cornwall-on-the-Hudson, N. Y., have also been received.

Flinn, R. F. The leaching of some plant nutrients following the burning of forest litter. *Black Rock Forest Papers* 1 (No. 21): 128-134. 1943. Price 50¢.

Tryon, Henry H. The management of young volunteer hardwood stands. *The Black Rock Forest Bulletin* No. 13: 1-28. 1945. Price \$1.00.

From Cuba, two publications have been received:

Del Valle, C. G. El maiz dulce. *Estacion Experimental Agronomica, Santiago de las Vegas, Cuba, Bulletin* 62: 1-18. 1945. This discusses the development of varieties of sweet corn suitable for growth in Cuba.

Roig y Mesa, Juan Tomas. Plantas medicinales, aromaticas o venenosas de Cuba. Parts 1 & 2. We hope to publish a review of this work in the near future.

FIELD TRIPS OF THE CLUB

APRIL 28. ALBION, N. J. This was a joint outing with the Academy of Natural Sciences of Philadelphia to the Jersey pine barrens. *Lupinus perennis* and *Hudsonia ericoides* were in full bloom. A large number of the expected plants were seen. Leaders, Charles E. Mohr, John M. Fogg, Jr., Arthur LaDow and W. L. Dix. Attendance about 60.

APRIL 29. ARDEN, N. Y. for lichens. Eighty-four species were recorded, the longest list yet for a single day trip. The early spring was evident from the report: "*Rhododendron nudiflorum*, seen in flower in this same region on April 15, was mostly faded. *Coptis trifolia* was past full flower. In full flower were *Vaccinium corymbosum*, *Polygala paucifolia*, *Carex stricta*. In each case the first flowers must have appeared at a much earlier date, probably new records for earliness." Leader, G. G. Nearing. Attendance 11.